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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,986	06/23/2003	Billy Joe Ratliff JR.	DN2003096	9094

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THE GOODYEAR TIRE & RUBBER COMPANY  
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EXAMINER
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MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/601,986

Applicant(s)

RATLIFF, BILLY JOE

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. 121605
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2-7-06 has been entered.

2) The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Incorporation of "the axially outer edge of each rib chamfer, relative to the centerline of the rib, being convexly curved" from claims 14 and 15 into the specification. This subject matter is supported by original figures 1, 1B, 6 and 7. The following change is suggested: After "maintaining good ground contact pressure for the rib 10." on the last line of paragraph 19 on page 4 of the specification, insert --As shown in figures 1, 1B, 6 and 7, the axially outer edge of each rib chamfer, relative to the centerline of the rib, is convexly curved.--

3) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4) Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 15, it is unclear how many chamfers each block is required to have. In claims 1 and 15, it is suggested to change "chamfers located at the axially

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inner most point of the block" to --a chamfer located at the axially innermost point of each block--.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Kuhr et al

6) **Claims 1-4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhr et al (US 5,234,042) in view of Japan 513 (JP 2002-240513) and Himuro 384 (US 5,885,384).**

Kuhr et al discloses a pneumatic tire having a central rib between a pair of circumferential grooves, inclined grooves (steeply slanted grooves) and profiled elements (blocks) wherein effective drainage is obtained. Each profiled element (block) extends from a central region to shoulders as claimed since the profiled element extends from one of the circumferential grooves to a location beyond the edge of the tire width support A. See figures 1 and 3. In figure 1, the rib is zigzag. In figure 3, the rib is straight. Kuhr et al teaches the two circumferential grooves communicate with relatively steeply oriented grooves that make it possible for water that is present to easily flow off at any time (col. 2 lines 51-54).

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide Kuhr et al's central rib such that the rib has an "almost straight" configuration at the tread depth defined at the base of the grooves in view of Kuhr et al's teaching to

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define the central rib between a pair of linear circumferential grooves or a pair of zigzag circumferential grooves. Although "almost straight" excludes "straight", one of ordinary skill in the art would readily understand from Kuhr et al's disclosure (figures 1,3) that some variance from straight for the rib is permitted, contemplated and suggested.

With respect to the rib chamfers, it would have been obvious to one ordinary skill in the art to provide the "almost straight" central rib of Kuhr et al's tire for effective drainage with chamfers, laterally oriented edges, and circumferentially oriented edges as claimed (lines 13-19 of claim 1) since Japan 513, also directed to a directional tire tread having slant grooves and center rib, suggests forming recessed parts 28 (chamfers) on both lateral edges of the central rib (figure 1) such that each recessed part 28 (chamfer) has a length L1 of 10-50% of the touch down length L1 (footprint length) and so that water can be drained to the circumferential grooves 14, 14. It is noted that figure 3 of Kuhr et al appears to illustrate small triangular recessed parts extending along each edge of the straight rib. It is also noted that Japan 513 suggests offsetting chamfers 28 on one side of the rib from chamfers 28 on the other side of the rib. The claimed laterally oriented edges read on short edges 30C of recessed parts 28. See figure 2 of Japan 512. Motivated by the desire found in Kuhr et al to improve water drainage of a tire tread, one of ordinary skill in the art would have found it obvious to provide the almost straight rib of Kuhr et al with "rib chamfers" to improve drainage of water at the center rib into the circumferential grooves as per the teachings of Japan 513.

With respect to the block chamfers, it would have been obvious to one of ordinary skill in the art to provide the axially innermost points of the profiled elements (blocks) with chamfers extending into the junction of the steeply slant grooves as claimed since it is well known / conventional in the tire tread art to chamfer an axially innermost corner of a block between steeply slanted grooves to improve drainage and enhance ground contact pressure of the block as evidenced by Himuro 384, which like Kuhr et al discloses a directional tread pattern having slant grooves and a central rib. See col. 7 lines 47-63 of Himuro 384. As can be seen from Kuhr et al's figures (figure 1 or figure 3), the axially inner end of the profile element (blocks) has an acute corner. Himuro 384 provides ample motivation to chamfer this acute angle corner to prevent crushing of the acute angle corner and thereby improve drainage and enhance ground contact pressure for effectively contributing to steering stability and resistance to uneven wear.

With respect to axially adjacent, the applied prior art when considered as a whole fairly suggests providing the block chamfer in each side region and the rib chamfer located on the adjacent lateral edge of the rib such that they are "axially adjacent". Japan 513 teaches providing the recessed part 28 (rib chamfer) with a length L1 of 10-50% of the footprint length Lo such that the rib chamfer is longer than the opening of the slant groove and overlaps the acute angle corner of an adjacent block. See figures 1, 2 and paragraph 66 of the machine translation. Japan 513 therefore motivates one of ordinary skill in the art to locate and size the recessed parts 28 (rib chamfers) for improving drainage such that the rib chamfer has a length of 10-50% of the footprint

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length, extends across the entire opening of the slant groove and overlaps an acute angle corner of an adjacent profile element (block).

As to claim 2, the Kuhr et al's profiled elements (blocks) in figures 1 and 3 are not divided by circumferential grooves and thereby are continuous from the central region to the shoulders as claimed.

As to claims 3 and 4, Japan 513's rib chamfers 28 decrease in width and height.

As to claim 12, the width and height of the rib chamfer 28 suggested by Japan 513 *decreases* in height in the direction opposite the tire rotation direction whereas the width and height of the block chamfer suggested by Himuro 384 *increases* in the direction opposite the rotating direction.

As to claim 13, Japan 513's disclosure of  $L1 = 10-50\% Lo$  and  $P = 20-75\% Lo$  for the recessed parts 28 (rib chamfers) suggests rib chamfers on opposing sides of the rib being circumferentially overlapping..

**7) Claims 6-7 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhr et al in view of Japan 513 and Himuro 384 as applied above and further in view of Europe 685 (EP 688685).**

As to claims 6-7, it would have been obvious to provide Kuhr et al's slant grooves with the claimed maximum width in the central 15% of each side region since, Europe 685, directed to improvement of wet performance of a tire with a directional tread having a central rib and slant grooves, suggests sizing such grooves such that the slant groove is wider in the middle region.

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As to claims 10-11, it would have been obvious to provide Kuhr et al's tread, which has the rib chamfers therein, such that the NTG decreases from the tread edge toward the tread center (or in other words, the negative ratio increases from the tread edge toward the tread center), since Europe 685 suggests increasing negative ratio from the side end of the tread toward the central region so as to obtain improvement of drainage property and ensuring rigidity for steering stability. As to maximum NTG at the EP, note the rib at the EP.

**8) Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhr et al in view of Japan 513 and Himuro 384 as applied above and further in view of Japan 919 (Japan 2002-103919).**

As to claim 8, it would have been obvious to use sipes in Kuhr et al's tread such that the claimed sipe density is 2-8 sipes per inch (0.78-3.15 sipes / cm) since Japan 919, also directed to improving drainage of a directional tire tread having a central rib and slant grooves, suggests forming sipes at a pitch (spacing) of for example 5.8 mm, in the central rib so that the tire tread has excellent braking effect on ice / snow in addition to having improved drainage.

**9) Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhr et al in view of Japan 513, Himuro 384 and Japan 919 as applied above and further in view of Japan 604 (JP 1-215604).**

As to claim 9, it would have been obvious to extend sipes into the recessed parts (chamfers / lower stage areas) in view of Japan 604's suggestion to extend the sipes



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into the wall of the circumferential rib to prevent decrease in driving and braking performance when the tire is worn.

obvious type double patenting

10) The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**11) Claims 1-5, 8-9 and 12-15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-17 of copending Application No. 10/601,936 in view of Kuhr et al and Europe 971 (EP 1,075,971).**

Claim 1 of copending 10/601,936 recites a pneumatic tire having rib chamfers as required by claims 1, 14 and 15 of this application. Claims 1 and 16 of copending 10/601,936 (as amended by the examiner's amendment mailed 1-31-06) requires "the outer edge of each chamfer is convexly curved relative to the centerline of the rib".

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Claims 1 and 16 of copending 10/601,936 do not recite steeply slanted grooves and blocks. However, it would have been obvious to one of ordinary skill in the art to provide the tire of claim 1, 3-17 of copending 10/601,936 with circumferential grooves, slant grooves and blocks with chamfers as claimed in view of the suggestion from (1) Kuhr et al (figures 1, 3) and Europe 971 (figure 8) to provide a tire having a central rib between two circumferential grooves with slant grooves and blocks which extend from the circumferential grooves to the tread edges so as to provide the tread with improved drainage and (2) Europe 971's suggestion to chamfer the acute angle corner of the blocks to improve drainage; it being noted that (a) claim 1, 16 of copending 10/601,936 requires chamfers connected to the rib, (b) claim 12 of copending 10/601,986 recites circumferentially overlapping chamfers and (c) Europe 971 shows that pseudo land portions ("chamfers") that are connected to the rib may be axially adjacent to the block chamfers.

This is a provisional obviousness-type double patenting rejection.

#### **Allowable Subject Matter**

12) **Claim 1 would be allowable if (1) rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and (2) amended to include the subject matter of the configuration and location of the opposite ends of the circumferentially extending edges shown in figures 1, 1B, and 7 (i.e. amended to describe --wherein each circumferentially extending edge extends substantially straight from an axially innermost end of a laterally oriented**

**edge from which a rib chamfer extends to an axially outermost end of the circumferentially adjacent laterally oriented edge--).**

As can be seen from figures 1, 2 of Japan 513, the circumferentially extending edge extending from the axially innermost end of a laterally oriented edge 30C to the axially outermost end of the circumferentially adjacent laterally oriented edge 30C is not straight since it comprises a straight segment and an inclined segment. In view of this illustrated configuration and Japan 513's teaching to use a pitch P of 20-75% the footprint length, there is no motivation to further modify Kuhr et al such that the resulting rib has substantially straight circumferentially extending edges as shown in figures 1, 1B and 7 of applicant's original disclosure.

**Claim 5 would be allowable if (1) rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims and (2) the obvious type double patenting rejection is overcome by filing a proper terminal disclaimer.**

As to claim 5, the prior art of record, including Europe 971, fails to suggest further modifying Kuhr et al such that the rib chamfer has an axially outermost edge gradually increasing in height and an axially innermost edge gradually decreasing in height.

**Claim 14 would be allowable if (1) rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims and (2) the**

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**obvious type double patenting rejection is overcome by filing a proper terminal disclaimer.**

**Claim 15 would be allowable if (1) rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and (2) the obvious type double patenting rejection is overcome by filing a proper terminal disclaimer.**

With respect to claims 14 and 15, the prior art fails to suggest further modifying Kuhr et al such that "the axial outer edge of each rib chamfer, relative to the centerline of the rib, is convexly curved".

#### Remarks

13) Applicant's arguments filed 2-7-06 and the attached exhibits 1 and 2 have been fully considered but they are not persuasive in view of the following comments: Japan 513 motivates one of ordinary skill in the art to form recessed parts 28 (rib chamfers) having the length  $L1$  of 10-50% of the footprint length  $L0$  in Kuhr et al's center rib to improve drainage of water to the circumferential grooves. When having this length  $L1$ , the recessed part overlaps the acute angle corner of a block (figure 1 of Japan 513), which Himuro 384 suggests should be chamfered to prevent deformation of the acute angle corner and thereby improve drainage and enhance ground contact pressure for contributing to steering stability and resistance to uneven wear. Examiner agrees that figure 3 of Kuhr et al does not illustrate a footprint, but adds that Japan 513's recessed part 28 (rib chamfer) has a length  $L1$  and shows such a recessed part 28 (rib chamfer)

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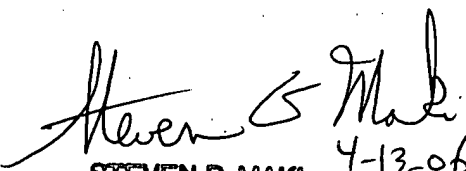
as overlapping the acute angle corner of a block. Kuhr et al contains no teaching that a "notching" in the rib must have a short length.

14) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
April 13, 2006

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
4-13-06